

Patent claims

1. A heat exchanger, in particular a charge-air/coolant radiator (1), with a disk structure having a plurality of disks (2), two adjacent disks (2) defining an intermediate space through which a heat transfer medium flows, and having in each case one heat transfer medium inlet (9) and heat transfer medium outlet (11), characterized in that at least two heat transfer medium ducts (5, 6) are provided per heat transfer medium inlet and/or outlet (9, 11 respectively).
2. The heat exchanger as claimed in claim 1, characterized in that the heat transfer medium ducts (5, 6) run perpendicular to the plane of the disks (2).
3. The heat exchanger as claimed in claim 1 or 2, characterized in that the disks (2) are of axially symmetrical design, based on their longitudinal axis, with regard to the heat transfer medium ducts (5, 6).
4. The heat exchanger as claimed in one of the preceding claims, characterized in that disks (2) are of axially symmetrical design, based on their transverse axis, with regard to the heat transfer medium ducts (5, 6).
5. The heat exchanger as claimed in one of the preceding claims, characterized in that the heat transfer medium inlet (9) and/or the heat transfer medium outlet (11) has a branching section (7) or converging section (10).

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6. The heat exchanger as claimed in claim 5, characterized in that the branching section and/or converging section (7, 10 respectively) are designed in the form of an arc of a circle.
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7. The heat exchanger as claimed in one of claims 5 and 6, characterized in that a bend of 30° to 90°, as seen in the flow direction, is provided in the region of the branching section (7) and/or
10 converging section (10).
8. The heat exchanger as claimed in one of claims 5 to 7, characterized in that the heat transfer medium inlet (9) which merges into two heat
15 transfer medium ducts (5) after the branching section (7) runs parallel to the heat transfer medium ducts (5), while the bipartite part of the branching section (7) is arranged in a plane which is perpendicular to said heat transfer medium
20 ducts (5).
9. The heat exchanger as claimed in one of claims 5 to 8, characterized in that the heat transfer medium outlet (11) which merges from two heat
25 transfer medium ducts (6) into the converging section (10) runs parallel to the heat transfer medium ducts (6), while the bipartite part of the branching section (7) is arranged in a plane which is perpendicular to said heat transfer medium
30 ducts (6).
10. The use of a heat exchanger as claimed in one of claims 1 to 9 as a charge-air/coolant radiator (1) or oil cooler.